T. A. EDISON.

Improvement in Printing-Telegraphs.

No. 131,335. Patented Sep. 17, 1872.

Fig. 2.

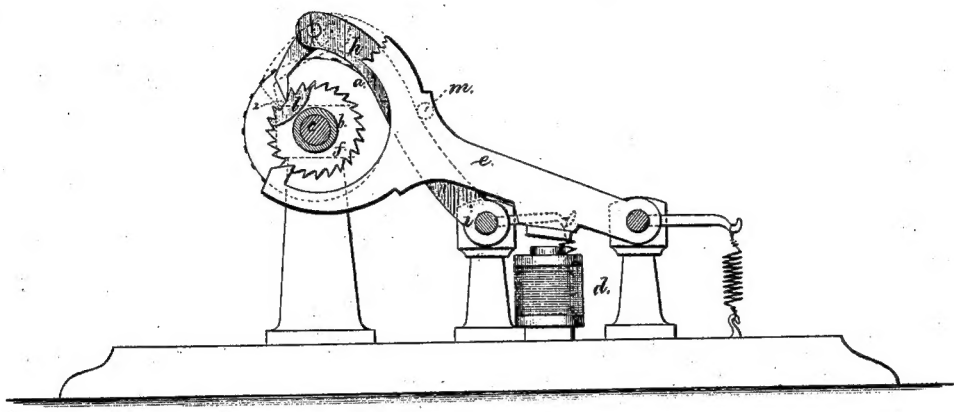
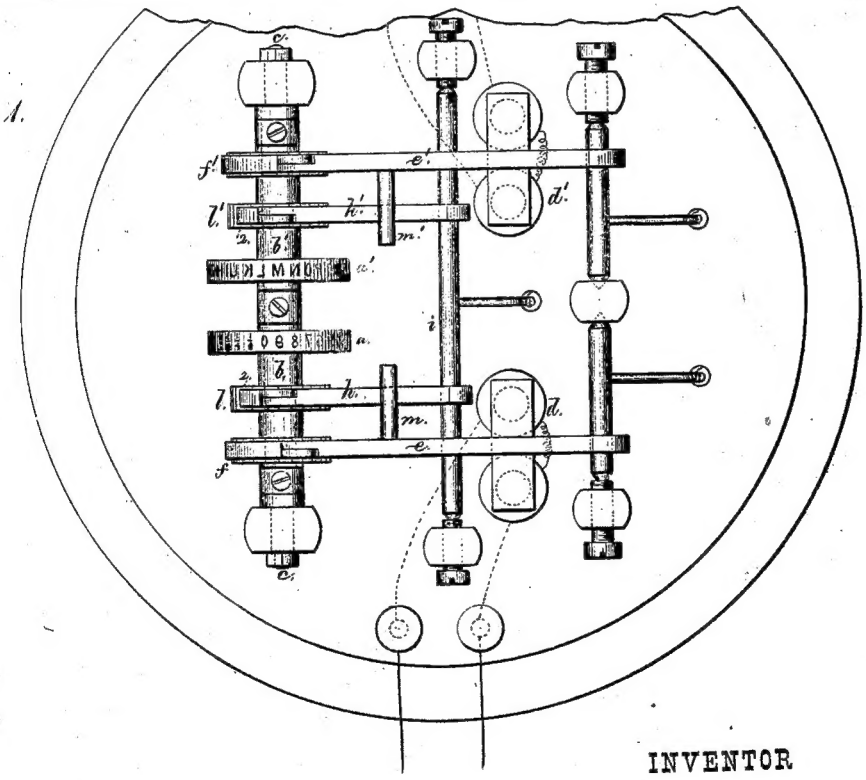


Fig. 1.



INVENTOR

Thomas A. Edison,

Per Samuel W. Seaman

Witnesses.

Chas. A. Smith

Harold Serrell

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN PRINTING-TELEGRAPHS.

Specification forming part of Letters Patent No. **131,335**, dated September 17, 1872.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Newark, in the county of Essex and State of New Jersey, have invented an Improvement in Printing-Telegraph Instruments; and the following is hereby declared to be a full and correct description of the same.

This instrument is of that class in which two type-wheels, rotated by separate step-by-step movements, are employed to print in two lines upon one strip of paper. My improvement relates to employing an auxiliary lever and ratchet-wheel in connection with each of the usual type-wheel levers, and these auxiliary levers are so arranged that when either of the type-wheel levers is vibrated by its magnet to rotate the type-wheel the other type-wheel is rotated and brought to unison by means of the auxiliary lever acting upon its ratchet-wheel, and rotating said wheel until its pawl or pallet ceases to turn said wheel, in consequence of a tooth being removed from the same. The space where the tooth is removed from the ratchet-wheel is at a place in such relation to the zero or unison point of the type-wheel that when said ratchet-wheel stops revolving the type-wheel is at zero, and is in unison with the transmitter, and so remains ready to be brought into action by that instrument.

In the drawing, Figure 1 is a plan of my improved instrument, and Fig. 2 is a sectional elevation of the same.

a a' are the type-wheels secured to the sleeves *b b'*, which revolve upon the stationary shaft *c*, when actuated by their respective electro-magnets *d d'*, through the armatures and levers *e e'* and ratchet-wheels *f f'*. The magnets *d d'* are in independent electric circuits, and either type-wheel may be revolved, stopped, and printed from, according to which magnet is energized, as heretofore usual. *h h'* are the auxiliary levers upon the shaft or fulcrum *i*, and *l l'* are their respective ratchet-wheels secured to the sleeves *b b'*; and from each wheel *l l'* a tooth is removed, as at 2. These levers *h h'* are contiguous to the levers *e e'*, and pins *m m'* project from the same and rest upon said levers *h h'*. When either type-wheel is in use—say the wheel *a'*—its lever *e'* is vibrated by the magnet *d'*, and its pin *m'* will vibrate the auxiliary lever *h'*, and, through the shaft *i*, will vibrate the lever *h'* and rotate the ratchet-wheel *l* and its sleeve and type-wheel *a;* and said wheel *l* will be rotated until the pawl or pallet of *h* arrives at the space 2, where the tooth is removed; and said pawl will then move up and down in said space without turning the wheel *l*, if the lever *h* continues to be vibrated. The type-wheel *a* is now at zero and in unison with the transmitter, ready to be brought into action by that instrument. The wheel *a*, when in use, acts, by its lever *e* and pin *m*, to vibrate the lever *h'*, to rotate the ratchet-wheel *l'* and bring the type-wheel *a'* to unison.

The printing-lever and its magnet are not shown in the drawing. They may be of any desired character, and the magnet may be in a separate electric circuit or in a circuit to the magnets *d* or *d'*. Ordinarily the change in operating the type-wheels will take place at the zero-points; hence the levers *h h'* will not be operative unless there has been a loss in the movement of the type-wheel that is thrown out of action.

I claim as my invention—

Two type-wheels separately revolved by a step-by-step motion, in combination with a separate lever or levers operated by the mechanism that is moving one type-wheel to set the other type-wheel, substantially as specified.

Signed by me this 15th day of June, A. D. 1872.

T. A. EDISON.

Witnesses:

GEO. T. PINCKNEY,

CHAS. H. SMITH.